REMARKS

The Office Action dated October 2, 2008, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

STATUS OF THE CLAIMS

Claims 1-16 are currently pending in the application, of which claims 1, 13, and 16 are independent claims. Claims 4, 9, and 13-15 have been amended to more particularly point out and distinctly claim the subject matter of the present invention. No new matter has been added. Claims 1-16 are respectfully submitted for consideration.

CLAIM REJECTIONS UNDER 35 U.S.C. 112

Claims 1-12 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Applicants respectfully traverse this rejection.

The Office Action asserted that the limitation of "generating...second multicast tree for control messages...from a network multicast controller to at least one multicast controller at cell level...transmitting the control messages...along the at least one second multicast tree to the at least one multicast controller," as recited in claim 1, is indefinite. The Office Action asserted that the limitation is indefinite because it is directed towards

multicast messages but can yield a situation where messages are transmitted from the network multicast controller to one cell level controller, which is unicast.

However, as shown in Figure 4 of the present application, multicast messages (e.g., 406, 408, and 410) may be transmitted from a network multicast controller (e.g., an SCM) to one cell-level multicast controller (e.g., an CC) (*see also* Specification at paragraphs [0023]-[0024] and [0032]-[0036]). The designations "unicast," "multicast," and "broadcast" limit the type of messages transmitted by the way in which they are addressed, but do not limit the number of network devices that receive the messages. For example, a "broadcast" message may be intended for all network devices to receive, but may be received by only one of the network devices. Likewise, a unicast message may be received by multiple network devices. Thus, the limitation of claim 1 directed towards multicast messages is not ambiguous for yielding the situation where the messages are received by one cell level controller since the messages are still addressed using multicast addressing, not unicast or broadcast addressing. Accordingly, Applicants respectfully submit that the rejection of claim 1, and its dependent claims 2-12, is improper, and respectfully request that the rejection of the claims be withdrawn.

Reconsideration and allowance of claims 1-12 are respectfully submitted.

CLAIM REJECTIONS UNDER 35 U.S.C. 103

Claims 1, 4, 11, 13, and 15-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Appln. Pub. No. 2002/0073086 of Thompson et al.

("Thompson") in view of U.S. Patent No. 7,075,929 of Korus et al ("Korus"). The Office Action acknowledged that Thompson fails to disclose or suggest all of the features of any of the presently pending claims, and cited Korus to remedy the deficiencies of Thompson with respect to the rejected claims. Applicants respectfully traverse this rejection.

Independent claim 1, upon which claims 2-12 depend, is directed to a method including transmitting multicast data packets in at least one first multicast tree from one transmitter through a plurality of multicast controllers to a plurality of recipients. The method also includes generating at least one second multicast tree for control messages in an internet protocol network from a network multicast controller to at least one multicast controller at cell level. The method further includes transmitting the control messages from the network multicast controller along the at least one second multicast tree to the at least one multicast controller at cell level. The control messages include information on the multicast transmission of the internet protocol network and a command configured to connect to the at least one first multicast tree of the internet protocol network configured for multicasts.

Independent claim 13, upon which claims 14-15 depend, is directed to an arrangement for implementing multicasting in internet protocol networks, including a plurality of routers configured to transmit different components in the internet protocol networks to each other. The arrangement also includes at least one first multicast tree configured to transmit multicast packets through a plurality of multicast controllers to a plurality of recipients. The arrangement further includes a plurality of cell-level

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multicast controllers configured to transmit packets to the plurality of receivers. The arrangement additionally includes a network multicast controller that is arranged to control the cell-level multicast controllers. An internet protocol network includes at least one second multicast tree configured to route control messages from the network multicast controller to the plurality of cell-level multicast controllers. The network multicast controller is configured to transmit the control messages along the at least one second multicast tree to the plurality of cell-level multicast controllers. The control messages include information on the multicast transmission of the internet protocol network and a command configured to connect to the at least one first multicast tree of the internet protocol network configured for multicast transmissions.

Independent claim 16 is directed to an arrangement including first transmission means for transmitting different components in internet protocol networks to each other. The arrangement also includes second transmission means for transmitting multicast packets through a plurality of multicast controllers to a plurality of recipients. The arrangement further includes third transmission means for transmitting packets to the plurality of receivers. The arrangement additionally includes control means for controlling the cell-level multicast controllers. An internet protocol network includes fourth transmission means for routing control messages transmitted from the control means to the third transmission means. The control means is for transmitting the control messages along the fourth transmission means to the second transmission means. The control messages include information on the multicast transmission of the internet

protocol network and a command configured to connect to the second transmission means of the internet protocol network configured for multicast transmissions.

Applicants respectfully submit that the combination of Thompson and Korus fails to disclose or suggest all of the features of any of the presently pending claims.

Thompson generally relates to a network including a query originator that injects queries of network devices into the network at a query node using query messages. The network transports the query messages to the network devices, or to network nodes at which queries about the network devices can be answered. Query responses from the network devices or network nodes are directed through the network to a collection node or nodes. As an internal network node receives multiple query responses from network devices, the internal network node might aggregate, as needed, the multiple query responses into an aggregated query response that preferably occupies less bandwidth than the aggregated multiple query responses. Where the result desired at the collection node is a computer function of the multiple query responses, the computed function can be performed at each internal network node on the multiple query responses received at that node (*see* Thompson at Abstract).

Korus generally relates to methods for limiting the scope of flooding of dense mode Internet Protocol (IP) multicast calls. A multicast scope value is determined for each call based on the location of participating devices for the call at one or more destination sites, zones or zone clusters. The multicast scope value is adjusted based on user location, as wireless users may roam from site to site or zone to zone. When a user

sources packets for a call, the packets include the multicast scope value. The packets are transported, according to dense mode routing protocols, across various router interfaces of a packet network. The router interfaces are assigned various thresholds based on their location in the network. Packets are not flooded across router interface(s) having thresholds that exceed the packet's multicast scope value (*see* Korus at Abstract).

Applicants respectfully submit that the combination of Thompson and Korus fails to disclose or suggest all of the features of any of the presently pending claims. Specifically, the combination of Thompson and Korus does not disclose or suggest "generating at least one second multicast tree … and transmitting the control messages … along the at least one second multicast tree … the control messages comprising … a command configured to connect to the at least one **first multicast tree**," as recited in independent claim 1 and similarly recited in independent claims 13 and 16 (emphasis added).

The Office Action took the position that these features are disclosed by Thompson at Figures 10(a) and (c), and page 7, paragraph [0099]. In the cited portion, Thompson states, "The broadcast center sends CS 1 a message to be distributed to program A's recipients instructing them to join a new query distribution group rooted at the broadcast center group … (step 1, FIG. 10(a))." The cited portion continues, "Upon receiving the instruction, [the recipients] send join messages up to the broadcast center, constructing the query distribution tree … ." "Once the tree is established, the broadcast center multicasts queries on the new multicast group (step 4, FIG. 10(c))" (*see* Thompson at

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page 7, paragraph [0099]). The Office Action asserted that this new multicast group of Thompson corresponds to the generated second multicast tree of the claimed invention (*see* Office Action at pages 3-4).

However, Thompson fails to disclose or suggest transmitting queries, along the new multicast group, that include a command configured to connect to **another multicast tree**, such as the distribution tree of the program A. Accordingly, Thompson does not disclose or suggest generating at least one second multicast tree and transmitting control messages, along the at least one second multicast tree, that include a command configured to connect to at least one **first multicast tree**. Thus, Thompson fails to disclose or suggest the purpose of the claim invention, which is to command "a terminal with a unidirectional link ... [to] receive multicast transmissions even though it cannot transmit a request to the network and thus not register as a recipient of multicast transmissions" (*see* Specification at paragraph [0012]).

Korus does not cure the deficiencies of Thompson. As discussed above, Korus generally relates to methods for limiting the scope of flooding of dense mode IP multicast calls. However, Korus fails to disclose or suggest generating at least one second multicast tree and transmitting control messages, along the at least one second multicast tree, that include a command configured to connect to at least one first multicast tree.

Therefore, the combination of Thompson and Korus does not disclose or suggest "generating at least one second multicast tree ... and transmitting the control messages ... along the at least one second multicast tree ... the control messages comprising ... a

command configured to connect to the at least one first multicast tree," as recited in independent claim 1 and similarly recited in independent claims 13 and 16.

For at least the reasons discussed above, Applicants respectfully submit that the combination of Thompson and Korus fails to disclose or suggest all of the elements of independent claims 1, 13, and 16. Accordingly, Applicants respectfully request that the rejection of claims 1, 13, and 16 be withdrawn.

Claims 4, 11, and 15 depend from, and further limit, independent claims 1 and 13. Thus, each of claims 4, 11, and 15 recite subject matter that is neither disclosed nor suggested in the combination Thompson and Korus. Accordingly, Applicants respectfully request that the rejections of claims 4, 11, and 15 be withdrawn.

Reconsideration and allowance of claims 1, 4, 11, 13, and 15-16 are respectfully submitted.

Claims 2 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson in view of Korus and further in view of U.S. Patent Appln. Pub. No. 2002/0143951 of Khan et al. ("Khan"). The Office Action took the position that the combination of Thompson and Korus discloses all of the elements of the claims, with the exception of the features recited in claims 2 and 14. The Office Action then relies upon Khan as allegedly curing these deficiencies in the combination of Thompson and Korus. Applicants respectfully traverse this rejection.

In order for this rejection to be sustainable, the combination of Thompson, Korus, and Khan must teach all the recitations of independent claims 1 and 13. Accordingly, the

arguments presented above supporting the patentability of independent claims 1 and 13 over the combination of Thompson and Korus are incorporated herein to support the patentability of dependent claims 2 and 14. Therefore, it is respectfully requested that dependent claims 2 and 14 be allowed. Khan fails to cure the deficiencies of the combination of Thompson and Korus.

Khan generally relates to a method and a system for sending multicast information to a user using agents, network programs, that reside on multicast-enabled computers. The agents receive multicast data packets sent to members of a multicast group. The agents repackage the multicast information into a unicast data packet and forward the unicast data packet to a client registered with the agent (*see* Khan at Abstract).

However, Khan fails to cure the deficiencies of the combination of Thompson and Korus. Similarly to the combination of Thompson and Korus, Khan fails to disclose or suggest, at least, "generating at least one second multicast tree ... and transmitting the control messages ... along the at least one second multicast tree ... the control messages comprising ... a command configured to connect to the at least one first multicast tree," as recited in independent claims 1 and 13. Khan is silent as to teaching the particular features associated with the command of independent claims 1 and 13.

Therefore, the combination of Thompson, Korus, and Khan would not lead a person of ordinary skill in the art to arrive at the features of the command as recited in independent claims 1 and 13. Consequently, Applicants submit that independent claims 1 and 13 and related dependent claims 2 and 14 are not obvious over the combination of

Thompson, Korus, and Khan. Accordingly, Applicants respectfully request that the rejection of claims 2 and 14 be withdrawn.

Reconsideration and allowance of claims 2 and 14 are respectfully submitted.

Claims 3, 5, and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson in view of Korus and further in view of U.S. Patent No. 6,243,758 of Okanoue ("Okanoue"). The Office Action took the position that the combination of Thompson and Korus discloses all of the elements of the claims, with the exception of the features recited in claims 3, 5, and 9. The Office Action then relies upon Okanoue as allegedly curing these deficiencies in the combination of Thompson and Korus. Applicants respectfully traverse this rejection.

In order for this rejection to be sustainable, the combination of Thompson, Korus, and Okanoue must teach all the recitations of independent claim 1. Accordingly, the arguments presented above supporting the patentability of independent claim 1 over the combination of Thompson and Korus are incorporated herein to support the patentability of dependent claims 3, 5, and 9. Therefore, it is respectfully requested that dependent claims 3, 5, and 9 be allowed. Okanoue fails to cure the deficiencies of the combination of Thompson and Korus.

Okanoue generally relates to a computer network formed by subnetworks in which a multicast scope is defined as a reachable extent of multicast packets. Each host in the scope transmits a multicast packet containing a scope field indicating that transmission of the multicast packet beyond the scope is forbidden. The packet also contains a boundary

flag indicating whether only those hosts within the scope are allowed to participate in a group activity or mobile hosts outside the scope are also allowed to participate in the group activity (*see* Okanoue at Abstract).

However, Okanoue fails to cure the deficiencies of the combination of Thompson and Korus. Similarly to the combination of Thompson and Korus, Okanoue fails to disclose or suggest, at least, "generating at least one second multicast tree ... and transmitting the control messages ... along the at least one second multicast tree ... the control messages comprising ... a command configured to connect to the at least one first multicast tree," as recited in independent claim 1. Okanoue is silent as to teaching the particular features associated with the command of independent claim 1.

Therefore, the combination of Thompson, Korus, and Okanoue would not lead a person of ordinary skill in the art to arrive at the features of the command as recited in independent claim 1. Consequently, Applicants submit that independent claim 1 and related dependent claims 3, 5, and 9 are not obvious over the combination of Thompson, Korus, and Okanoue. Accordingly, Applicants respectfully request that the rejection of claims 3, 5, and 9 be withdrawn.

Reconsideration and allowance of claims 3, 5, and 9 are respectfully submitted.

Claims 6-8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson in view of Korus and further in view of U.S. Patent Appln. Pub. No. 2005/0063352 of Amara et al. ("Amara"). The Office Action took the position that the combination of Thompson and Korus discloses all of the elements of the claims, with the

exception of the features recited in claims 6-8. The Office Action then relies upon Amara as allegedly curing these deficiencies in the combination of Thompson and Korus. Applicants respectfully traverse this rejection.

Amara is not prior art with respect to the present application, since Amara was filed October 14, 2004, which is later than the properly-perfected priority date of the present application, of September 7, 2001. Amara is related to U.S. Patent No. 6,839,338, which also has a later filing date than the present application, of March 20, 2002. Accordingly, it is respectfully requested that the rejection of claims 6-8 be withdrawn as based on a reference that is not prior art under 35 U.S.C. 102(e) or any other statutory section.

Reconsideration and allowance of claims 6-8 are respectfully submitted.

Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson in view of Korus and further in view of U.S. Patent Appln. Pub. No. 2005/0283447 of Xu et al. ("Xu"). The Office Action took the position that the combination of Thompson and Korus discloses all of the elements of the claims, with the exception of the features recited in claim 10. The Office Action then relies upon Xu as allegedly curing these deficiencies in the combination of Thompson and Korus. Applicants respectfully traverse this rejection.

Xu is not prior art with respect to the present application, since Xu was filed August 23, 2005, which is later than the priority date of the present application, of September 7, 2001. Xu is related to U.S. Patent Appln. No. 10/077,780, which also has a

later filing date than the present application, of February 20, 2002. Accordingly, it is respectfully requested that the rejection of claim 10 be withdrawn as based on a reference that is not prior art under 35 U.S.C. 102(e) or any other statutory section.

Reconsideration and allowance of claim 10 are respectfully submitted.

Claim 12 was rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson in view of Korus and further in view of U.S. Patent Appln. Pub. No. 2003/0061333 of Dean et al. ("Dean"). The Office Action took the position that the combination of Thompson and Korus discloses all of the elements of the claims, with the exception of the features recited in claim 12. The Office Action then relies upon Dean as allegedly curing these deficiencies in the combination of Thompson and Korus. Applicants respectfully traverse this rejection.

Based on its actual filing date, Dean (filed May 3, 2002) is not prior art with respect to the present application since it was filed after September 7, 2001, which is the priority date for the present application. Applicants note that Dean's effective (not actual) filing date would appear to be May 4, 2001, based on its relationship to U.S. Provisional Patent Appln. No. 60/289,023 (the '023 application). Applicants note, however, that the '023 application is quite different, at least in form, from O'Neill. For example, the '023 application appears to be an invention disclosure. In any event, the '023 application was not published, as provisional applications are not published by the USPTO. Accordingly, for at least these reasons, it is respectfully requested that the rejection of claim 12 be withdrawn as based on a reference that is not prior art under 35

U.S.C. 102(e) or any other statutory section. If the rejection is maintained based on the disclosure of the '023 application, it is respectfully submitted that a *prima facie* rejection must substantiate the rejection with reference to the disclosure of the '023 application, by page and line number of that document.

Reconsideration and allowance of claim 12 are respectfully submitted.

CONCLUSION

For the reasons explained above, it is respectfully submitted that each of claims 1-16 recite subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-16 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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